PPSC Physics Full Book

Sr	Questions	Answers Choice
1	Which of the following parameters does not characterize the thermodynamic state of matter.	A. Temperature B. Pressure C. Volume D. work
2	A given mass of air occupies 12 m2 at normal atmospheric pressure if the pressure is increased to 4 times the original value without changing the temperature what volume will the air occupy.	A. 3 cm3 B. 6 cm3 C. 9 cm3 D. 12 cm3
3	A Carnot engine has the same efficiency between (i) 100 K and 500 K and ii) T and 900 K What will be T.	A. 90 K B. 100 K C. 180 K D. 200 K
4	Under steady state the temperature of a body	A. Increase's with time B. Decreases with time C. Does not charge with time D. None of the above
5	A metallic rod is continuously heated at its two ends, The heat following through the rod does not depend upon.	A. Mass of the upon B. Area of cross section of the rod C. Temperature gradient between two ends D. Time for which heat flow through the rod
6	When a hot liquid is mixed with a cold liquid temperature of the mixture.	A. First decreases and then becomes constant B. First increases and then becomes constant C. Continuously decreaes D. Is undefined for some time and then nearly becomes constant
7	The mechanical equivalent of heat	A. Has the same dimension as heat B. Has the same dimension as work C. Has the same dimensions as energy D. Is dimensionless
8	How many calories of heat are required to evaporate completely 1 g or ice at 0 ^{O}C	A. 120 calories B. 520 calories C. 720 calories D. 920 calories
9	A heat engine with 100% efficiency would have to	A. Do no work B. Be at a uniform temperature C. Use no heat D. Discharge at 0^oC
10	On increasing the temperature of source efficiency of Carnot engine.	A. Increase B. Decrease C. First increases and then decreases D. Does not change
11	What type of process is the Carnot's cycle.	A. Reversible B. Irreversible C. Neither reversible nor irreversible D. May be reversible or irreversible
12	The internal energy of monoatomic gas is.	A. 3/2 RT B. Independent of temperature C. In the form of K.E. D. Partially kinetic and partially potential
13	The ideal thermal efficiency of a cyclic heat engine is limited by	A. Friction in the engine B. Amount of heat in the engine C. Difference between input temperature and output temperature. D. Amount of work
		A. Heat constant

14	Which of the following should not change in isothermal operation.	B. Volume C. Pressure D. Temperature
15	The ratio of specific heat capacity to motor heat capacity of a body	A. Is a universals cantante B. Depends upon the mass of the body C. Depends upon the molecular weight of the body D. Is dimensionless
16	How much Ice will melt by 50,000 J of heat.	A. 120 J B. 130 g C. 140 J D. 150 g
17	Which of the following pairs represent units of the same physical quantity.	A. Kelvin and joule B. Kelvin and calrorie C. Newton and calorie D. Joule and calorie
18	The specific heat capacity of the body depends upon.	A. the heat given to it B. Mass of the body C. Temperature raised D. Material of the body
19	The behavior of the gases that can be easily liquefied is like that of the.	A. Triatomic gases B. Ideal gases C. Van der walls gases D. Dia atomic gases
20	Which thermodynamic law state taht the entropy of a perfect system approaches zero.	A. Zeroth law of thermodynamics B. First law of thermodynamics C. Second law of thermodynamics D. Third law of thermodynamics
21	If the temperature of the source and sink are increased by same amount the efficiency of the engine.	A. Increases B. Decreases C. Remains unchanged D. May increases of decrease
22	Two stem engine A and B have their sources at 900 K and 600 K and their sinks are at 450 K and 300 K respectively.	A. They are equally efficient B. A is less efficient than B C. a is more efficient than B D. Their efficiencies cannot be determined
23	During an adiabatic gas expansion the environment	A. Serves as a heat sink B. Serves as a heat source C. Must be at a higher temperature than the gas D. Does not have to participate
24	A heat engine can develop efficiency equal to 100% if the temperature of the sink is	A. Less than that of source B. Equal to that of source C. 0 K D. 0 ^oC
25	The amount of heat needed per unit mass to raise the temperature of a system one degree at constant pressure is numerically aqual to	A. The specific heat B. The specific thermal energy C. The specific heat at constant pressure D. the internal energy of the gas
26	Entropy of universe is increasing day by da due to.	A. Power generating processes B. Energy used into work C. Depletion of ozone D. All of the above
27	Which of the following has negative specific heat	A. Ne B. CO2 C. O2 D. Sturated vapours
28	Why freezer a refrigerator is located in the top section	A. Motor is not affected B. Heat gained from environment is less C. The entire chamber of freezer is cooled quickly D. Heat gained from environment is more
29	The total gain in entropy of the working substance in a Carnot cycle is.	A. Positive B. Negative C. Infinite D. Constant
		A. 4.2 J B. 42 J

30	What is the amount of mechanical work done to melt 1 g of ic completely	D. 42 J C. 80 J D. 336 J